Amendments to the Claims:

1.   (currently amended) A system for publishing ~~images~~ <u>studies</u> over a communication network, comprising:

        a study storage device for storing a plurality of studies, each study comprising one or more images;

        a publication server coupled to said communications network, said publication server ~~adapted~~ <u>operative</u> to enter an automatic <u>publishing</u> mode wherein one or more studies from among said plurality of studies are automatically sent to a client computer coupled to said communications network as they become available on said study storage device <u>without any intervention by a user;</u>

        said client computer <u>comprising:</u> ~~adapted to receive said one or more studies and store them in a local cache; and~~

~~said client computer comprising means for a user to enter an interactive mode whereby said automatic mode is interrupted and an interactive viewing session is initiated for immediately viewing one or more images of a selected study regardless of the percentage already received, wherein said one or more images of said selected study are displayed first using data already in said local cache, and second from data obtained from said publication server using progressive image streaming techniques in response to requests for one or more regions of interest (ROI) representing required study data not found in said local cache.~~

        <u>means for receiving said one or more studies and storing them in a local cache;</u>

        <u>means for permitting the user to interrupt said automatic publishing mode at any time for a selected study that has not yet been received in its entirety from said publication server, and immediately entering an interactive mode whereby a dynamic interactive viewing session is initiated between the user and said publication server;</u>

        <u>means for streaming image data from said publication server to said client computer during said interactive viewing session using progressive image streaming techniques in response to requests for one or more regions of interest (ROI), said ROIs corresponding to specific portions of an image as</u>

determined by the user's current viewing parameters and preferences, wherein said progressive image streaming techniques utilize compression to transmit said ROI image data in encoded layers of increasing accuracy and quality whereby the most visually important image data is streamed first;

wherein a search for requested ROI image data is first performed on said local cache, and only if not found, said requested ROI image data is streamed by said publication server to said client computer; and

wherein transmission of ROI image data from said publication server during said interactive mode for said selected study is given higher priority over transmission of study data of non-selected studies which continues at lower priority.

2.   (previously amended) The system according to claim 1, wherein said publication server is adapted to send said one or more studies to said client computer in accordance with a set of publication rules.

3.   (previously amended) The system according to claim 2, wherein said publication rules comprise instructions for determining, for each new study, which clients are to receive it.

4.   (previously amended) The system according to claim 1, wherein said client computer comprises means for using only required data stored in said local storage when said user initiates a viewing session of said selected study after all said required data for said selected study is completely received.

5.   (previously amended) The system according to claim 1, wherein said client computer comprises means for using progressive image streaming techniques to retrieve data from said publication server for said selected study when said user initiates a viewing session of said selected study before any data corresponding thereto has been received by said client computer.

6.   (original) The system according to claim 1, wherein said client computer comprises data pull means adapted to periodically poll said publication server for new studies that have not yet been retrieved.

7.   (original) The system according to claim 1, wherein said client computer comprises data push means adapted to configure said publication server to automatically check for and send new studies that have not yet been transmitted to said client.

8.   (previously amended) The system according to claim 1, wherein said publication server is adapted to send said one or more studies to said client using progressive image streaming techniques whereby information is sent in encoded layers wherein each successive layer has higher accuracy and quality than the layer previous thereto.

9.   (original) The system according to claim 1, wherein said client computer comprises means whereby if said user initiates a viewing session of said selected study after data is completely received by said client, then said client utilizes said data to provide instant rendering of images within said selected study.

10.   (original) The system according to claim 1, further comprising means for permitting said user to freely switch back and forth between automatic mode and interactive mode without the need to switch protocols.

11.   (original) The system according to claim 1, wherein said progressive image streaming techniques are performed utilizing JPEG2000 standard.

12.   (currently amended) An image publication system for use on a client computer coupled to a communications network, comprising:

first means for ~~receiving a first command from a user to enter~~ entering an automatic publishing mode whereby new studies are sent automatically from a publication server to said client computer over said communications network as they become available without requiring any intervention by a user;

a local cache for storing said studies ~~upon receipt~~;

second means for receiving said studies and [[for]] storing them in said local cache;

~~third means for receiving a second command from said user to interrupt said automatic mode and to immediately enter an interactive mode regardless of the percentage of said selected already received, whereby one or more images of a selected study are viewed first using image data present in said local cache, and second from~~

~~data obtained from said publication server using progressive image streaming techniques in response to requests for one or more regions of interest (ROI) representing required study data not found in said local cache; and~~

third means for permitting the user to interrupt said automatic publishing mode at any time for a selected study that has not yet been received in its entirety from said publication server, and immediately entering an interactive mode whereby a dynamic interactive viewing session is initiated between the user and said publication server;

fourth means for streaming image data from said publication server to said client computer during said interactive viewing session using progressive image streaming techniques in response to requests for one or more regions of interest (ROI), said ROIs corresponding to specific portions of an image as determined by the user's current viewing parameters and preferences, wherein said progressive image streaming techniques utilize compression to transmit said ROI image data in encoded layers of increasing accuracy and quality whereby the most visually important image data is streamed first;

wherein a search for requested ROI image data is first performed on said local cache, and only if not found, said requested ROI image data is streamed by said publication server to said client computer;

wherein transmission of ROI image data from said publication server during said interactive mode for said selected study is given higher priority over transmission of study data of non-selected studies which continues at lower priority; and

fifth ~~fourth~~ means for decoding and displaying data received from said publication server in response to said requests for one or more ROIs.

13.   (previously amended) The system according to claim 12, wherein said publication server is adapted to send said studies to said client computer in accordance with a set of publication rules.

14.   (previously amended) The system according to claim 12, wherein said publication server is adapted to send said studies while in said automatic mode using progressive image streaming

techniques whereby information is sent in encoded layers wherein each successive layer has higher accuracy and quality than the layer previous thereto.

15.   (previously amended) The system according to claim 12, wherein said client computer comprises means for using only data stored in said local cache when a user initiates a viewing session of said selected study after all data for said selected study is completely received.

16.   (previously amended) The system according to claim 12, wherein said client computer comprises means for using progressive image streaming techniques to retrieve data from said publication server for said selected study when a user initiates a viewing session of said selected study before any data corresponding thereto has been received by said client computer.

17.   (original) The system according to claim 12, wherein said client computer comprises data pull means adapted to periodically poll said publication server for new studies that have not yet been retrieved.

18.   (original) The system according to claim 12, wherein said client computer comprises data push means adapted to configure said publication server to automatically check for and send new studies that have not yet been transmitted to said client.

19.   (previously amended) The system according to claim 12, wherein said publication server is adapted to send said one or more studies to said client while in interactive mode using progressive image streaming techniques whereby information is sent in encoded layers wherein each successive layer has higher accuracy and quality than the layer previous thereto.

20.   (previously amended) The system according to claim 12, wherein said client computer comprises means whereby when said user initiates a viewing session of said selected study after data is completely received by said client, then said client utilizes said data to provide instant rendering of images within said selected study.

21.   (previously amended) The system according to claim 12, further comprising means for permitting said user to freely switch back and forth between said automatic mode and said interactive mode without the need to switch protocols.

22.　　(original) The system according to claim 12, wherein said progressive image streaming techniques are performed utilizing JPEG2000 standard.

23.　　(currently amended) An image publication system for use on a publication server computer coupled to a communications network, comprising:

first means for ~~receiving instructions from a client computer coupled to said communications network, said first means for~~ configuring said publication server computer in an automatic publishing mode <u>in response to a command received from a client computer coupled to said communications network</u> whereby new studies are automatically sent to said client computer as ~~said new studies~~ <u>they</u> become available <u>without requiring any intervention by a user;</u>

~~second means for interrupting said automatic publishing mode and immediately switching to an interactive mode, regardless of the percentage of a selected study already transmitted to said client computer, in response to one or more commands received from a user, said commands comprising requests for one or more regions of interest (ROI) of one or more images within said selected study; and~~

~~third means for sending specific layers of accuracy for requested regions of interest to said client computer in response to said requests.~~

<u>second means for halting said automatic publishing mode at any time for a selected study that has not yet been transmitted in its entirety to said client computer, and immediately entering an interactive mode whereby a dynamic interactive viewing session is initiated between a user and said publication server computer;</u>

<u>third means for streaming image data from said publication server computer to said client computer during said interactive viewing session using progressive image streaming techniques in response to requests from said client computer for one or more regions of interest (ROI), said ROIs corresponding to specific portions of an image as determined by the user's current viewing parameters and preferences, wherein said progressive image streaming techniques utilize compression to transmit said ROI image data in encoded layers of increasing accuracy and quality whereby the most visually important image data is streamed first;</u>

wherein said requested ROI image data is streamed by said publication server to said
client computer only if said requested ROI image data is not found during a
search of local cache on said client computer; and

wherein transmission of ROI image data from said publication server during said
interactive mode for said selected study is given higher priority over transmission
of study data of non-selected studies which continues at lower priority.

24.   (previously amended) The system according to claim 23, wherein said publication server
computer is adapted to send said one or more studies to said client computer using progressive
image streaming techniques whereby information is sent in encoded layers wherein each
successive layer has higher accuracy and quality than the layer previous thereto.

25.   (original) The system according to claim 24, wherein said progressive image streaming
techniques are performed utilizing JPEG2000 standard.

26.   (previously amended) The system according to claim 23, wherein said publication server
computer is adapted to send one or more of said new studies to said client computer in
accordance with a set of publication rules.

27.   (currently amended) A computer program product for use in a client computer coupled to
a communication network, said computer program product comprising:

a computer readable medium having computer readable program code means embodied
in said medium for receiving and displaying studies from a publication server
coupled to said communications network, said computer program product
comprising:

computer readable program code means for receiving a first command from a user to
enter entering an automatic publishing mode whereby new studies are sent
automatically from said publication server to said client computer over said
communications network as they become available without requiring any
intervention by a user;

computer readable program code means for receiving said studies and [[for]] storing them
in a local cache coupled to said client computer;

computer readable program code means for ~~receiving a second command from said user to interrupt said automatic mode and to immediately enter an interactive mode regardless of the percentage of said selected already received, whereby one or more images of a selected study are viewed first using image data present is said local cache, and second from data obtained from said publication server using progressive image streaming techniques in response to requests for one or more regions of interest (ROI) representing required study data not found in said local cache; and~~ <u>permitting the user to interrupt said automatic publishing mode at any time for a selected study that has not yet been received in its entirety from said publication server, and immediately entering an interactive mode whereby a dynamic interactive viewing session is initiated between the user and said publication server</u>

<u>computer readable program code means for streaming image data from said publication server to said client computer during said interactive viewing session using progressive image streaming techniques in response to requests for one or more regions of interest (ROI), said ROIs corresponding to specific portions of an image as determined by the user's current viewing parameters and preferences, wherein said progressive image streaming techniques utilize compression to transmit said ROI image data in encoded layers of increasing accuracy and quality whereby the most visually important image data is streamed first, wherein a search for requested ROI image data is first performed on said local cache, and only if not found, said requested ROI image data is streamed by said publication server to said client computer, wherein transmission of ROI image data from said publication server during said interactive mode for said selected study is given higher priority over transmission of study data of non-selected studies which continues at lower priority; and</u>

computer readable program code means for decoding data received from said publication server in response to requests for one or more ROIs.

28.   (currently amended) A computer program product for use in a publication server computer coupled to a communication network, said computer program product comprising:

a computer readable medium having computer readable program code means embodied in said medium for publishing studies to a client computer coupled to said communications network, said computer program product comprising:

computer readable program code means for ~~receiving instructions from said client computer and for configuring said publication server computer in an automatic publishing mode whereby new studies are automatically sent to said client computer as said new studies become available on a study database coupled to said publication server computer~~ <u>configuring said publication server computer in an automatic publishing mode in response to a command received from a client computer coupled to said communications network whereby new studies are automatically sent to said client computer as they become available without requiring any intervention by a user</u>;

computer readable program code means for ~~interrupting said automatic publishing mode and immediately switching to an interactive mode, regardless of the portion of a selected already transmitted to said client computer, in response to one or more commands received from a user, said commands comprising requests for one or more regions of interest (ROIs) of one or more images within said selected image~~ <u>halting said automatic publishing mode at any time for a selected study that has not yet been transmitted in its entirety to said client computer, and immediately entering an interactive mode whereby a dynamic interactive viewing session is initiated between a user and said publication server computer</u>; and

<u>computer readable program code means for streaming image data from said publication server computer to said client computer during said interactive viewing session using progressive image streaming techniques in response to requests from said client computer for one or more regions of interest (ROI), said ROIs corresponding to specific portions of an image as determined by the user's current viewing parameters and preferences, wherein said progressive image streaming techniques utilize compression to transmit said ROI image data in encoded layers of increasing accuracy and quality whereby the most visually important image data is streamed first, wherein said requested ROI image data is streamed by said publication server to said client computer only if said requested ROI image data is</u>

not found during a search of local cache on said client computer, wherein transmission of ROI image data from said publication server during said interactive mode for said selected study is given higher priority over transmission of study data of non-selected studies which continues at lower priority.

~~computer readable program code means for sending said specific layers of accuracy for requested regions of interest to said client computer in response to said requests.~~